

511,408

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number
WO 2004/052511 A1

(51) International Patent Classification⁷: **B01D 53/14**

(21) International Application Number:
PCT/US2003/039776

(22) International Filing Date:
11 December 2003 (11.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/433,257 12 December 2002 (12.12.2002) US

(71) Applicant (for all designated States except US): **FLUOR CORPORATION** [US/US]; One Enterprise Drive, Aliso Viejo, CA 92656 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **MAK, John** [US/US]; Fluor Corporation, Engineering Building, One Fluor Daniel Drive, Aliso Viejo, CA 92656 (US).

(74) Agent: **FESSENMAIER, Martin**; Rutan & Tucker, LLP, 611 Anton Blvd., Suite 1400, Costa Mesa, CA 92626 (US).

(81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE, EG, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

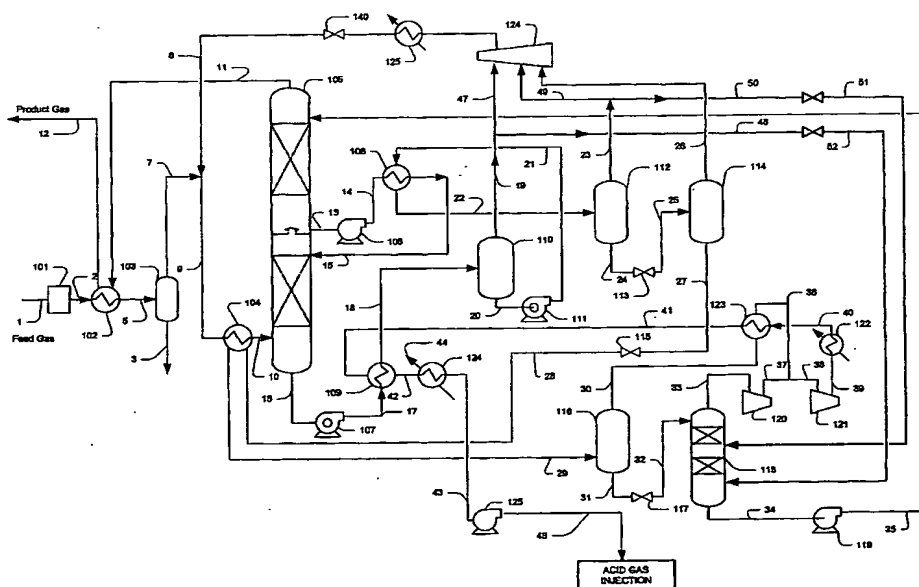
(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: CONFIGURATIONS AND METHODS OF ACID GAS REMOVAL



(57) **Abstract:** A plant includes a vacuum stripper (118) that receives a lean hydrogen sulfide-containing physical solvent (32) and in which substantially hydrogen sulfide-free stripping gas (51,52) is provided by at least one of a high-pressure flash vessel (110) and a medium pressure flash vessel (112). Contemplated configurations advantageously extend the range of use for physical solvents to treat sour gas comprising carbon dioxide and hydrogen sulfide, and can be used to meet most pipeline specification of 4 ppm hydrogen sulfide.

WO 2004/052511 A1